

I claim:

1. A method of assessing the risk of using industrial equipment to a user thereof by preparing a risk evaluation using a program, said method comprising:

- (a) inputting to a program information relating to a plurality of risk factors;
- (b) causing said program to estimate a net risk of injury to said user of said industrial equipment based on said information and based on evaluation data within said program;
- (c) said program producing a risk evaluation for said industrial equipment.

2. A method as claimed in claim 1 wherein one of said plurality of risk factors is based on safety characteristics of a particular facility in which said industrial equipment is to be used, said method including the step of estimating a level of risk reduction based on safety characteristics of said particular facility.

3. A method as claimed in claim 2 including the step of repeating the method for various pieces of industrial equipment, the risk evaluation being produced automatically.

4. A method as claimed in claim 2 including the step of inputting information of risk factors that increase risk together with risk factors that reduce risk.

5. A method as claimed in claim 4 including the steps of inputting information by estimating a risk of injury to said user based upon characteristics of said industrial equipment and estimating a level of risk reduction based upon safety features for said industrial equipment.

6. A method as claimed in claim 5 including the steps of inputting to a program information relating to a plurality of risk factors by operating said program to produce several risk factors, each risk factor for which an input is available having a range of risk, selecting a level of risk from said range of risk for each factor that is applicable to said industrial equipment, said program estimating a net risk of injury to said user based upon said selections.

7. A method as claimed in claim 5 including the step of printing the risk evaluation for said industrial equipment.

8. A method as claimed in claim 5 wherein each possible risk factor for which an input is available has at least three selections ranging from minor to major and said method includes the steps of

inputting a selection for each risk factor that is applicable to said industrial equipment.

9. A method as claimed in claim 5 wherein each risk factor for which an input is available has four selections ranging from minor to major and said method includes the steps of inputting a selection for each risk factor that is applicable to said industrial equipment.

10. A method as claimed in any one of claims 1, 2 or 3 including the step of inputting owner information into said risk evaluation.

11. A method as claimed in any one of claims 1, 2 or 3 including the step of inputting equipment identification information into said risk evaluation.

12. A method as claimed in any one of claims 1, 2 or 3 wherein said industrial equipment is one piece of industrial equipment and said method includes the steps of inputting information describing characteristics of each hazardous area of said industrial equipment and preparing a separate risk evaluation for each hazardous area.

13. A method as claimed in claim 5 including the step of estimating a risk of injury to said user based upon characteristics of said industrial equipment as if no guarding has been installed on said industrial equipment.

14. A method as claimed in claim 5 including the step of evaluating a probability of a risk factor of injury occurrence by inputting a level of risk for a risk factor severity of potential injury, a level of risk for a risk factor frequency of exposure and a level of risk for a risk factor possibility of hazard avoidance, there being no separate input for said probability of hazard occurrence.

15. A method as claimed in claim 5 including the step of estimating a level of risk reduction based on safety features for said industrial equipment by inputting a level of risk for primary safety elements based on mechanical devices or, alternatively, inputting a level of risk for primary safety elements based upon risk reduction methods that are passive in nature.

16. A method as claimed in claim 15 where said program permits inputting a level of risk for only one of the primary safety elements.

17. A method as claimed in claim 5 wherein the step of estimating a level of risk based on safety characteristics of a particular facility in which the industrial equipment is to be used includes the steps of inputting levels of risk for a nature of person exposed to a hazardous area and personal protective equipment

worn by persons who are present at or near said industrial equipment from time to time.

18. A method as claimed in claim 5 wherein the risk estimation includes an evaluation of risk for a probability of hazard occurrence, said method including the step of evaluating a level of risk from said range of risk for risk factors comprising said probability of hazard occurrence.

19. A method as claimed in claim 5 wherein said safety characteristics of said particular facility include a range of risk for a nature of exposed person, qualifications of exposed person, personal protective equipment and workplace safety policy and said method includes the steps of selecting a level of risk from each range of risk for each risk factor.

20. A method as claimed in any one of claims 1, 2 or 3 including the step of saving said risk evaluation electronically and updating said risk evaluation for said industrial equipment to reflect changes in any of said risk factors.

21. A method as claimed in any one of claims 1, 2 or 3 wherein said program can analyze multiple points of operation on a single piece of industrial equipment and said method includes analyzing

each point of operation separately and producing an evaluation for each point of operation on a single piece of industrial equipment.

22. A method as claimed in any one of claims 1, 2 or 3 wherein said program allows more than one version of a risk evaluation for said industrial equipment and said method includes the step of creating a new version of a risk evaluation or editing an existing version of a risk evaluation and inputting reasons for creating each version.

23. A method as claimed in claim 4 including the step of inputting information by estimating a risk of injury to said user based on characteristics of said industrial equipment as if no guarding has been installed on said industrial equipment.

24. A method as claimed in claim 4 including the step of inputting information by estimating a level of risk reduction based on safety features for said industrial equipment.

25. A method as claimed in any one of claims 1, 2 or 5 including the step of inputting information concerning an additional safety element relating to risk reduction.

26. A method as claimed in any one of claims 1, 2 or 5 including the step of inherently setting a probability of hazard occurrence at 100%.

27. A method as claimed in any one of claims 1, 2 or 5 including the step of inputting information concerning a probability of hazard occurrence.

28. A method as claimed in any one of claims 1, 2 or 5 including the step of inputting information concerning a probability of hazard occurrence within a range from substantially 90% to 100%.

29. A method as claimed in any one of claims 1, 2 or 5 including the step of inputting information concerning a probability of hazard occurrence ranging from substantially 50% to 100%.

30. A method as claimed in any one of claims 1, 2 or 5 including the step of inputting information concerning a probability of hazard occurrence ranging from substantially 0% to 100%.

31. A method as claimed in any one of claims 1, 2 or 5 including the step of inputting information concerning a probability of hazard occurrence over a broad range.

32. A risk assessment system for use with a computer, said system assessing the risk of injury to a user from industrial equipment by preparing a risk evaluation, said system comprising:

- (a) a range of pre-determined risk values for each of a plurality of potential risk factors for which inputs are available for said industrial equipment;
- (b) said system displaying each of said risk factors on demand and a range of inputs for a level of risk for each of said risk factors for which inputs are available;
- (c) said system accepting an input for each risk factor for which inputs are available;
- (d) said system determining a net value for all of said inputs and producing an assessment of risk for said industrial equipment.

33. A risk assessment system as claimed in claim 32 wherein one of said risk factors is a level of risk reduction based on safety characteristics of a particular facility in which said industrial equipment is to be used.

34. A risk assessment system as claimed in claim 32 wherein said system produces a report setting out a risk evaluation for said industrial equipment, said system being set up to automatically determine a net value for all of said inputs and produce an assessment of risk for said industrial equipment..



35. A risk assessment system as claimed in claim 34 wherein said report is a printable report.
36. A risk assessment system as claimed in claim 35 wherein said report contains inputs for various risk factors.
37. A risk assessment system as claimed in claim 32 wherein the risk factors relate to risk of injury based on characteristics of said industrial equipment and a level of risk reduction based on safety elements.
38. A risk assessment system as claimed in claim 37 wherein said risk factors further relate to a level of risk reduction based on a location where said equipment is to be installed.
39. A risk assessment system as claimed in claim 37 wherein said risk factors further relate to a level of risk reduction based on safety characteristics of a particular facility in which said industrial equipment is to be used.
40. A risk assessment system as claimed in claim 32 wherein said system requires input identifying an owner of the equipment.
41. A risk assessment system as claimed in claim 40 wherein said system requires input relating to an identification of the industrial equipment.

42. A risk assessment system as claimed in any one of claims 32, 33 or 34 wherein said level of risk for each of said risk factors for which inputs are available are available on pop-up menus.

43. A risk assessment system as claimed in any one of claims 32, 33 or 34 wherein said system permits a separate evaluation for each area of hazardous motion of a single piece of industrial equipment.

44. A risk assessment system as claimed in any one of claims 32, 33 or 34 wherein said system allows the creation of a new version or an edited version of an existing risk assessment for said industrial equipment provided that inputs are made clearly differentiating any new or edited version from a previous version.

45. A risk assessment system as claimed in any one of claims 32, 33 or 34 wherein a probability of hazard occurrence is inherently set at 100%.

46. A risk assessment system as claimed in any one of claims 32, 33 or 34 wherein a probability of hazard occurrence has inputs over a broad range.

47. A risk assessment system as claimed in any one of claims 32, 33 or 34 wherein said system has inputs for a probability of

hazard occurrence over a range from substantially 90% to substantially 100%.

48. A risk assessment system as claimed in any one of claims 32, 33 or 34 wherein said system has inputs for a probability of hazard occurrence over a range from substantially 80% to substantially 100%.

49. A risk assessment system as claimed in any one of claims 32, 33 or 34 wherein said system has inputs for a probability of hazard occurrence over a range from substantially 50% to substantially 100%.

50. A risk assessment system as claimed in any one of claims 32, 33 or 34 wherein said system has inputs for a probability of hazard occurrence over a range from substantially 0% to substantially 100%.